

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An apparatus for adapting an audio signal, comprising:
an audio usage environment information management means for collecting, describing and managing audio usage environment information related to consuming the audio signal; and
an audio adaptation means for adapting the audio signal to the audio usage environment information, wherein the audio adaptation means adapts the audio signal by changing sound field characteristics of the audio signal based on impulse response preference information of the user,
wherein the audio usage environment information includes user characteristics information, the user characteristics information includes the impulse response preference information that uses an impulse response to describe a describes sound field preference of the user for the audio signal, the impulse response preference information further includes sampling frequency preference information, bits per sample preference information, and number of channels preference information of the impulse response, and
wherein the audio adaptation means performs a convolution of the audio signal with an impulse response characterized by the sound field preference of the user.

2. (Currently Amended) The apparatus as recited in claim 1, wherein the user characteristics information ~~includes impulse response preference information describing the sound field preference of the user by the impulse response, and the audio adaptation means adapts the audio signal, and transmits the an adapted audio signal to the a user terminal by changing the sound field characteristics of the audio signal based on the impulse response preference information.~~

3. (Currently Amended) The apparatus as recited in claim 2, wherein characteristics of the impulse response preference information ~~includes sampling frequency preference information, bits per sample preference information, number of channel preference information of the impulse response or are obtained from a Uniform Resource Identifier (URI) address information for identifying that identifies the impulse response.~~

4. (Previously Presented) The apparatus as recited in claim 1, wherein the user characteristics information includes perceptual parameters preference information describing the sound field preference of the user by perceptual parameters, and the audio adaptation means adapts the audio signal and transmits the adapted audio signal to the user terminal by changing the sound field characteristics of the audio signal based on the perceptual parameters preference information.

5. (Previously Presented) The apparatus as recited in claim 4, wherein the perceptual parameters preference information includes information describing direct sound, energy of early room effect, and relative early energy at a low and high frequency.

6. (Previously Presented) The apparatus as recited in claim 4, wherein the perceptual parameters preference information includes energy of later room effect and relative early decay time.

7. (Previously Presented) The apparatus as recited in claim 4, wherein the perceptual parameters preference information includes energy of early room effect related to the direct sound and late decay time.

8. (Previously Presented) The apparatus as recited in claim 4, wherein the perceptual parameters preference information includes relative decay time at a low and high frequency and a reference distance that defines the perceptual parameters.

9. (Previously Presented) The apparatus as recited in claim 4, wherein the perceptual parameters preference information includes limitation of a low and high frequency and time limitation.

10. (Currently Amended) A method for adapting an audio signal, comprising the steps of:
a) collecting and managing audio usage environment information related to consuming the audio signal; and
b) adapting the audio signal to the audio usage environment information,

wherein adapting the audio signal further comprises:
changing sound field characteristics of the audio signal based on impulse response
preference information of the user,

wherein the audio usage environment information includes user characteristics information, the user characteristics information includes the impulse response preference information that uses an impulse response to describe a describes sound field preference of the user for the audio signal, and

wherein the impulse response preference information further includes sampling frequency preference information, bits per sample preference information, and number of channels preference information of the impulse responsewherein adapting the audio signal further comprises:

performing a convolution of the audio signal with an impulse response characterized by the sound field preference of the user.

11. (Currently Amended) The method as recited in claim 10, wherein ~~the user characteristics information includes impulse response preference information describing the sound field preference of the user by the impulse response and, at the step b), the audio signal is adapted and transmitted to the user terminal by changing the sound field characteristics of the audio signal based on the impulse response preference information~~adapting the audio signal further comprises transmitting an adapted audio signal to a user terminal.

12. (Currently Amended) The method as recited in claim 11, wherein characteristics of the impulse response preference information includes sampling frequency preference information, bits per sample preference information, number of channel preference information of the impulse response are obtained from a Uniform Resource Identifier (URI) address information for identifying that identifies the impulse response.

13. (Previously Presented) The method as recited in claim 10, wherein the user characteristics information includes perceptual parameters preference information describing the sound field preference of the user by perceptual parameters and, at the step b), the audio signal is

adapted and transmitted to the user terminal by changing the sound field characteristics of the audio signal based on the perceptual parameters preference information.

14. (Previously Presented) The method as recited in claim 13, wherein the perceptual parameters preference information includes information describing direct sound, energy of early room effect, and relative early energy at a low and high frequency.

15. (Previously Presented) The method as recited in claim 13, wherein the perceptual parameters preference information includes energy of later room effect and relative early decay time.

16. (Previously Presented) The method as recited in claim 13, wherein the perceptual parameters preference information includes energy of early room effect related to the direct sound and late decay time.

17. (Previously Presented) The method as recited in claim 13, wherein the perceptual parameters preference information includes relative decay time at a low and high frequency and a reference distance that defines the perceptual parameters

18. (Previously Presented) The method as recited in claim 13, wherein the perceptual parameters preference information includes limitation of a low and high frequency and time limitation.